

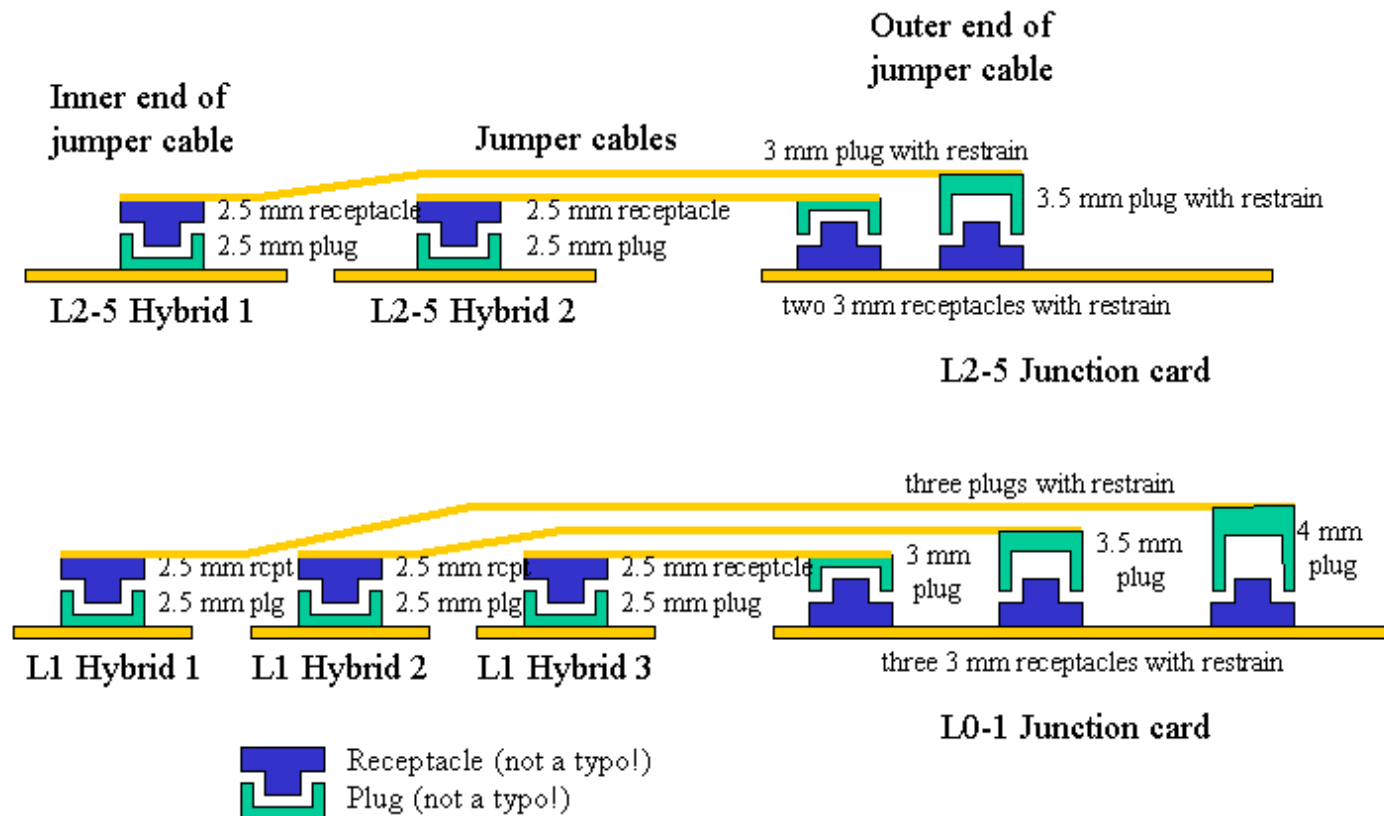


Cables, connectors, junction cards

Andrei Nomerotski 4/2/03

• Connectors

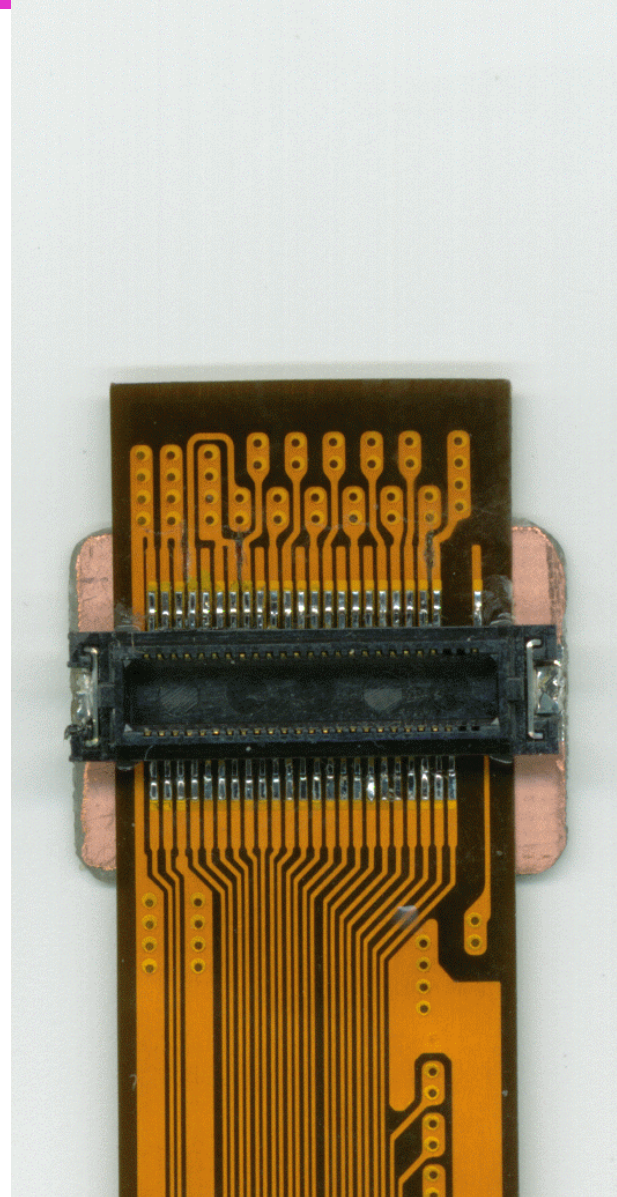
- ◆ Hybrid end 2.5 mm AVX
- ◆ Junction card end : 3.0, 3.5, 4.0 mm AVX with strain relief





Cable backing

- G10 backing is glued to Digital Jumper Cable under AVX connector
 - ◆ Prevents bending of the cable
 - ▲ Spec for AVX connectors is to be used with rigid substrates
 - ▲ Last summer had failures of clock lines with out backing
 - ▲ Good performance since started gluing the backing
 - ◆ Sturdier design
 - ◆ Easier plugging/unplugging





Dimensions & Strain Relief

- Dimensions
 - ◆ 16 x 12 mm in Design Parameters
 - ▲ 3 mm connector W=15.6 mm
 - ▲ 2.5 mm connector W=16.4 mm
 - ◆ Decision to use 2.5 mm connector
- Strain relief
 - ◆ 2.5 mm connector has strain relief pads
 - ▲ Makes assembly sturdier

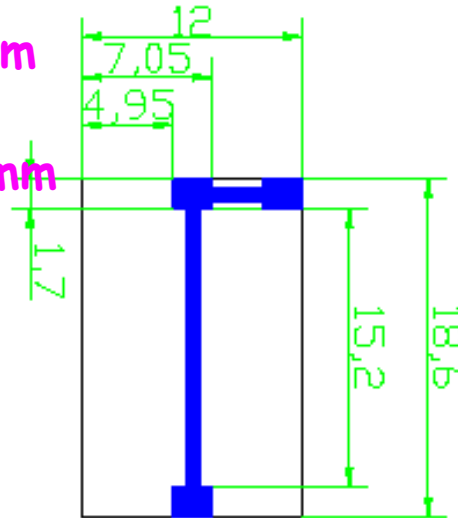




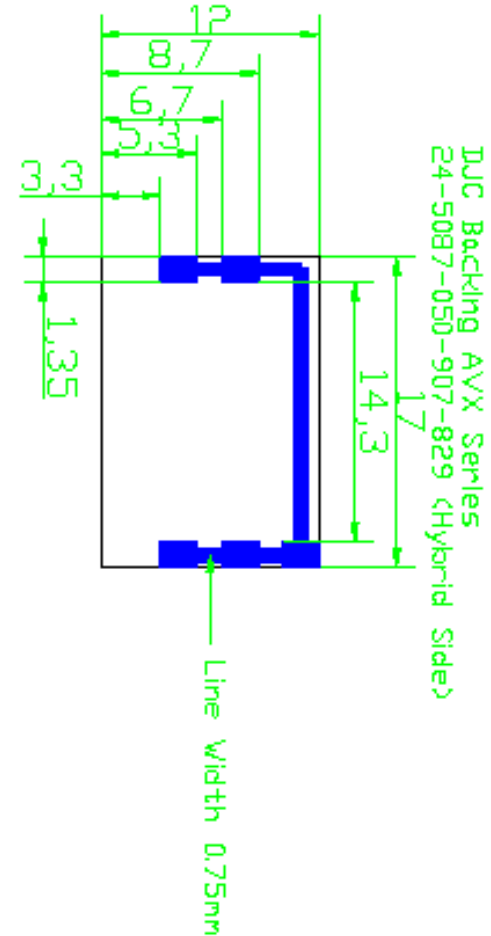
Dimensions & Strain Relief

Dimensions

- ♦ 2.5 mm AVX : 17×12 mm
 - ▲ Possibly 16.5×12 mm
- ♦ 3 mm AVX : 18.6×12 mm



DJC Backing-AVX Series
14-5046-050-630-829 (JC side)



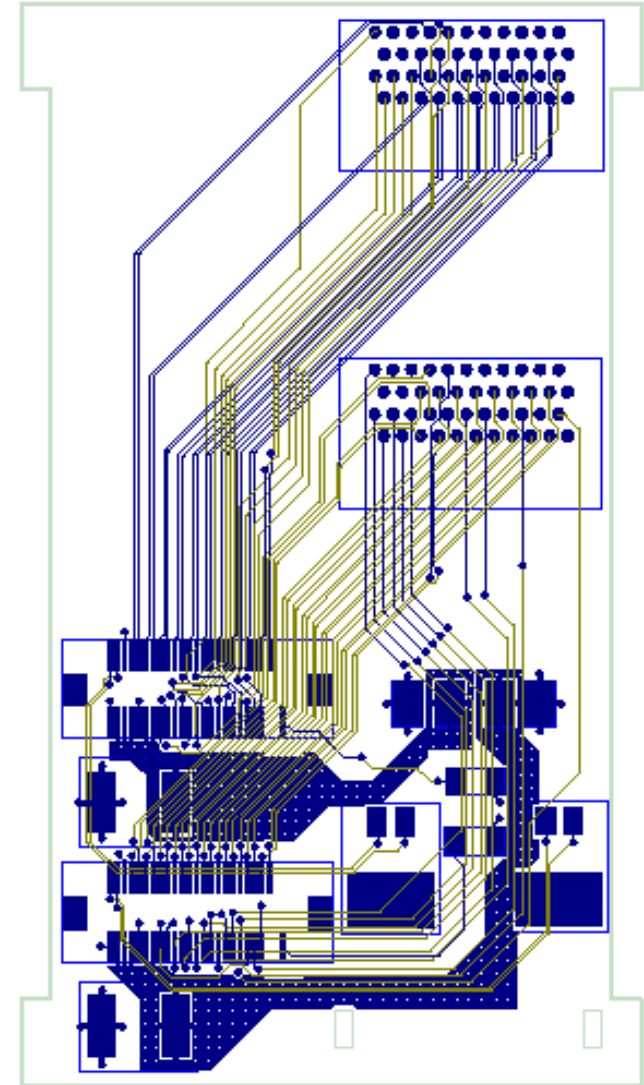
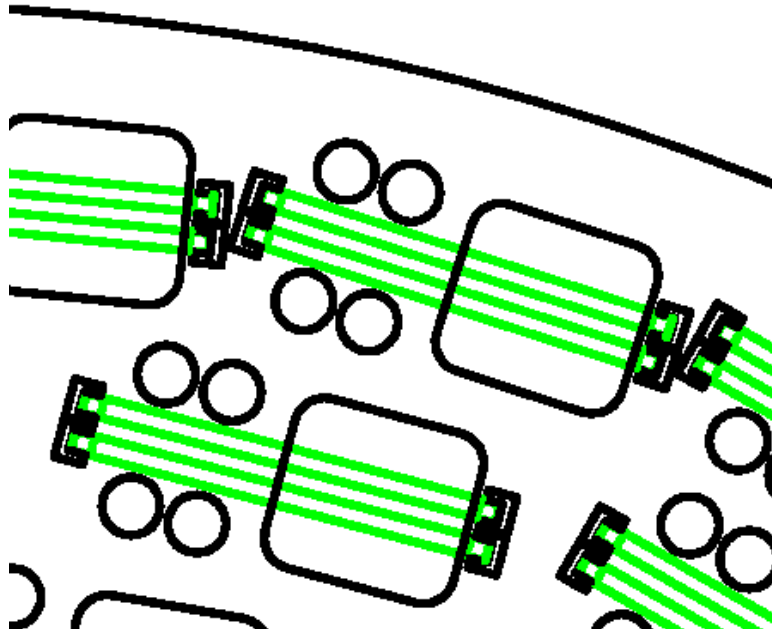
DJC Backing AVX Series
24-5087-050-907-829 (Hybrid Side)

- Have provisions to be connected to GND
- Ordering prototypes



Junction card

- Max dimensions 75 x 45 mm
- 3 types of JC
 - ♦ L2-5_top 2 channels
 - ♦ L2-5_bottom 2 channels
 - ♦ L0-1 3 channels
- Considering option with AVX connectors away from z=0 to facilitate assembly





Junction card

- Possible options for power and clock lines
 - ♦ As shown above
 - ♦ Clocks routed behind AVX connectors
 - ♦ Power coming as flat cable between top and bottom cards
- Clearly area of tight interference between electronics and mechanics – need discussion how to proceed with prototyping
- Issues
 - ♦ JC attachment
 - ♦ Cable strain relief
 - ♦ Assembly logistics of JC region
- General assembly logistics
 - ♦ When and how we cable up the detector